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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,024	01/29/2002	Kenneth V. Buer	36956.1000	2094
7590	05/25/2004		EXAMINER	TRAN, PABLO N
Michelle R. Whittington, Esq. SNELL & WILMER L.L.C. One Arizona Center 400 East Van Buren Phoenix, AZ 85004-2202			ART UNIT	PAPER NUMBER
			2685	
			DATE MAILED: 05/25/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/066,024	BUER ET AL.
Examiner	Art Unit	
Pablo N Tran	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by *Devlin et al.* (EP0624004A1).

As per claim 1, *Devlin et al.* disclosed a surface mountable high power block up-converter having a mixer configured to receive an IF frequency signal and a local oscillator signal and outputs an RF frequency signal within a millimeter wave or higher band (fig. 3, col. 1/ln. 3-col. 3/ln.42).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-7 rejected under 35 U.S.C. 103(a) as being unpatentable over *Devlin et al.* (EP0624004A1).

As per claims 2 and 6-7, as stated above in claim 1, *Devlin et al.* further disclosed the surface mountable high power block up-converter is enclosed and surface mountable.

Devlin et al. do not specifically disclosed that the mixer is of sub-harmonic type. However, such is notoriously well known in the art that the examiner takes Official Notice of such. Therefore, it would have been obvious to one of ordinary skill in the art to utilize such sub-harmonic mixer, well known, in place of the mixer of *Devlin*, in order to ensures that the harmonic is not generated in the mixer but also provide the sub-harmonic mixer operating with an identical frequency harmonic of the local-oscillator.

As per claim 3-4, *Devlin et al.* do not disclosed an insert coupled to the high power amplification device. However, such is notoriously well known in the art that the examiner takes Official Notice of such. Therefore, it would have been obvious to one of ordinary skill in the art to provide such high thermal conductivity and expansion insert to the device of *Devlin* in order to limit the level of power dissipation and improve heat dissipation within the device.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Garcia et al. (6,597,925), Betschneider et al. (6,535,546), Nakai et al. (6,570,442), Cook et al. (6,542,035), Kobayashi (6,317,003), Kondo et al. (6,462,628),

Buer et al. (6,160,454), Aizenberg et al. (56,078,101), and Minowa et al. (5,526,525) disclose radio frequency apparatus.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (703)308-7941. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

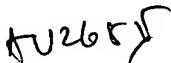
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

**PABLO N. TRAN
PRIMARY EXAMINER**

May 15, 2004


A handwritten signature in black ink, appearing to read "PABLO N. TRAN".

A handwritten code or timestamp in black ink, appearing to read "TU2655".